

## New World *Apanteles* Parasitic on *Diatraea*. (Hymenoptera: Braconidae)

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The seven species of *Apanteles* treated here, of which three were previously described, develop in larvae of species of *Diatraea* that live in the stems of certain grasses. One of them, *xanthopus* (Ashmead), is a solitary parasite; all the rest are gregarious and their cocoons, when formed, are tightly packed in the host burrows.

The following key will distinguish the seven forms.

1. Propodeum with a broad, sharply margined areola, and with distinct costulae that set off large apical, lateral areas. A solitary parasite. . . . . *xanthopus* (Ashmead)
- Propodeum without an areola or with a very narrow one that is usually poorly defined, and with no suggestion of costulae. All gregarious parasites. . . . . 2
2. Mesoscutum impunctate. . . . . *impunctatus* Muesebeck
- Mesoscutum distinctly punctate, at least anteriorly. . . . . 3
3. Plate of first tergite narrowing conspicuously from middle to apex; tegulae pale. . . . . 4
- Plate of first tergite parallel-sided from middle to apex; tegulae black or blackish. . . . . 5
4. Hind femora black; length about 3 mm.; female antennae nearly as long as the body; ovipositor sheath longer than hind tarsus. . . . . *minator*, new species
- Hind femora yellow; length about 2 mm.; female antennae much shorter than the body; ovipositor sheath not longer than hind femur. . . . . *zizaniae*, new species
5. Anterior and middle femora entirely yellow; hind femora piceous apically. . . . . *abditus*, new species
- Anterior femora in part, and middle and hind femora entirely, black. . . . . 6
6. Plate of first tergite about twice as long as broad; second flagellar segment of female antenna as long as first and twice as long as wide; ovipositor sheath longer than hind femur. . . . . *diatraeae* Muesebeck
- Plate of first tergite three times as long as broad; second flagellar segment of female antenna shorter than first and not nearly twice as long as wide; ovipositor sheath shorter than hind femur. . . . . *deplanatus*, new species

**Apanteles xanthopus** (Ashmead)

*Urogaster xanthopus* Ashmead, 1900. Trans. Ent. Soc. London 1900, Pt. 2: 288. ♀.

The type is from the island of St. Vincent. Numerous additional specimens in the U. S. National Museum are labeled as having been reared from *Diatraea saccharalis* (F.) in Argentina, Uruguay and Brazil. Jaynes, 1933 (U. S. Dept. Agr. Tech. Bull. 363: 21), points out that the cocoons occur singly in the smaller tunnels of the host, indicating that only one parasite develops in a host larva, and suggesting further that the *Apanteles* attacks the very small borers "shortly after they enter the stalk, or possibly even before they actually enter it."

This differs strikingly from all the other American species parasitic on *Diatraea* in its strongly sculptured and areolate propodeum. The thorax is not noticeably depressed; the female antennae are fully as long as the body; the mesoscutum is closely, finely punctate, confluent so anteriorly; the plate of the first tergite is nearly parallel-sided and about twice as long as broad at apex, and the ovipositor sheath is at least as long as the hind femur but decidedly shorter than the hind tibia. The legs, including all coxae, are yellow.

**Apanteles impunctatus** Muesebeck

*Apanteles impunctatus* Muesebeck, 1933. Proc. Ent. Soc. Wash. 35: 194. ♂ ♀.

This species is known only from the type series of 18 specimens which were reared from a single larva of *Diatraea saccharalis* (F.) in Louisiana.

**Apanteles minator**, new species

This is conspicuously the largest of the known American gregarious species of *Apanteles* that parasitize *Diatraea* larvae. It differs further in its less strongly depressed thorax, and in its longer ovipositor sheath which is longer than the hind tarsus.

*Female*. Length 3 mm. Head not broader than thorax; face only slightly convex, smooth and shining; frons polished;

temple with weak, setigerous punctures, somewhat receding; antenna nearly as long as the body, flagellar segments 1 to 8 at least twice as long as broad, the first not longer than the second.

Thorax a little broader than high; mesoscutum rather closely punctate, especially anteriorly, impunctate and polished at posterior border; disc of scutellum flat, polished, impunctate; polished area on lateral face of scutellum triangular and extending almost to base; propodeum indefinitely sculptured along lateral margins and down the middle, with an indication of a narrow, elongate areola; meso- and metapleuron impunctate, polished; hind coxa polished; inner spur of hind tibia much less than half as long as metatarsus; radius tending outward, very slightly longer than intercubitus; stigma and metacarpus subequal in length.

Abdomen with plate of first tergite narrower at apex than at base, more than twice as long as broad at apex, the apical half finely longitudinally rugulose and with a shallow, longitudinal median impression; plate of second tergite smooth and polished, slightly broader at base than long, defined laterally by strongly oblique grooves that diverge caudad, its posterior margin arcuate; ovipositor sheath slightly curved downward at apex, a little longer than hind tarsus.

Black; antennae, labrum and mandibles brownish black; tegulae transparent whitish; wings hyaline, stigma and veins hyaline except stigmal margin, radius, intercubitus and stub of last abscissa of cubitus, which are pale brown; anterior and middle legs brown, their coxae blackish; hind legs with coxae black, trochanters brown, femora piceous, tibiae light brown on basal two-thirds and blackish on apical third, and tarsi brownish black.

*Male.* Like the female except for the normal sexual differences and in having the antennae longer than the body and the legs more extensively darkened.

*Type.* U. S. National Museum No. 63285.

*Type-locality.* Misiones, ARGENTINA.

Described from five females and three males reared from *Diatraea angustella* Dyar by H. L. Parker.

**Apanteles zizaniae**, new species

Distinguished from all the other gregarious species considered here, except *impunctatus*, by its entirely yellowish legs, and from *impunctatus* by its distinctly punctate mesoscutum.

*Female*. Length about 2 mm. Face strongly convex, only about one-third as long as broad, weakly punctate and subopaque; frons smooth and polished, more than twice as long as face; level of upper eye margins far below anterior ocellus; antenna much shorter than the body, first flagellar segment longer than second, second twice as long as broad, flagellar segments 10 to 15 not distinctly longer than broad.

Thorax strongly depressed; mesoscutum distinctly punctate, the punctures weaker posteriorly; disc of scutellum flat, smooth and polished; propodeum nearly horizontal, mat, finely rugulose, and with a poorly defined median longitudinal area; first abscissa of radius and intercubitus subequal in length, meeting in a very weak angle; hind coxa smooth and shining; hind femur about three times as long as its greatest width; inner calcarium of hind tibia hardly half as long as metatarsus.

Abdomen with plate of first tergite parallel-sided on basal half, narrowing gradually from middle to apex, about three times as long as broad at apex, finely rugose, its flexible margins broad; plate of second tergite smooth and polished, strongly transverse, defined laterally at base by short, widely divergent grooves, less than half as long as broad at base and only one-fourth as long as the third tergite; suture separating second and third tergites very weak, sometimes not distinct; ovipositor sheath hardly as long as hind femur.

Head and thorax black; abdomen dark brown, with plate of first tergite black; antennae brown, yellowish basally; all legs yellowish; wings hyaline, stigma brown.

*Male*. Essentially like the female but with the antennae as long as the body, more slender than in the female and paler in color.

*Type*. U. S. National Museum No. 63286.

*Type-locality*. Anacostia Island, DISTRICT OF COLUMBIA.

Described from 16 females and 1 male reared by C. E. Chambliss from *Diatraea* sp. in wild rice from the type locality, and 3

specimens of each sex reared from a larva of *Diatraea* sp. in wild rice, at Wilmington, Delaware, by H. L. Dozier.

**Apanteles abditus**, new species

In habitus very similar to *diatraeae* Muesebeck, but distinguished especially by the much narrower sclerotized plate of the first tergite which is more than three times as long as its median width, by its somewhat shorter antennae and paler legs, and by having the first abscissa of the radius usually shorter than the intercubitus.

*Female*. Length about 2 mm. Head broader than thorax; face much broader than long, convex, smooth and shining; frons and vertex smooth and shining, impunctate; temple not receding but less than half as wide as eye; antenna shorter than body, first flagellar segment conspicuously the longest, flagellar segments 10 to 15 as broad as long.

Thorax strongly depressed; mesoscutum shining, sparsely punctate on anterior two-thirds, impunctate and polished posteriorly; disc of scutellum flat, impunctate, polished; propodeum only slightly declivous, finely rugulose, with a poorly defined, narrow, median longitudinal area and without costulae; mesopleuron polished, impunctate; posterior femur rather stout; inner calcarium of hind tibia less than half as long as metatarsus; first abscissa of radius usually distinctly shorter than intercubitus and joining the latter in a distinct angle.

Abdomen about as long as thorax; sclerotized plate of first tergite more than three times as long as its greatest width, nearly parallel-sided, weakly sculptured on caudal half; second tergite with two short, oblique furrows delimiting the central plate basally; suturiform articulation not evident; abdomen beyond first tergite polished; ovipositor sheath about as long as hind femur.

Black; antennal flagellum yellowish brown toward base; palpi pale yellow; all coxae black; remainder of legs yellowish except hind femora which are more or less piceous, and hind tibiae apically and hind tarsi which are dusky; tegulae and wing bases blackish; wings subhyaline, stigma pale yellow, transparent; veins pale.

*Male.* Essentially like the female but with the antennae slender and longer than the body, all the flagellar segments being at least twice as long as broad.

*Type.* U. S. National Museum No. 63287.

*Type-locality.* Itaquaquetuba, BRAZIL.

Described from 20 females and 1 male reared by H. L. Parker from a *Diatraea* larva in a grass belonging to the genus *Panicum*.

### **Apanteles deplanatus**, new species

Most similar to *abditus*, described above, but with the posterior legs largely black, the stigma brown rather than hyaline as in *abditus*, and the propodeum smooth and shining each side of the median area.

*Female.* Length about 2 mm. Face twice as broad as high, convex, shining, weakly punctate; antennae longer than head and thorax combined but shorter than the body; first flagellar segment distinctly longer than second, which is less than twice as long as broad; last ten segments of flagellum as broad as long.

Thorax strongly depressed, flattened above; mesoscutum shining, with numerous though distinctly separated punctures except posteriorly where it is smooth and polished; disc of scutellum flat, polished and impunctate; propodeum nearly horizontal, only very slightly and gradually declivous caudad, with a weak suggestion of a median longitudinal area, the space between this and the large spiracle on each side smooth and polished, the posterior lateral angles a little rugulose; first abscissa of radius and intercubitus subequal and meeting in a distinct angle; hind coxa smooth and polished; hind femur only slightly more than twice as long as broad; hind tibia conspicuously thickened apically, its inner calcarium nearly or quite half as long as metatarsus.

Abdomen with plate of first tergite more than three times as long as broad, very weakly sculptured; second tergite less than half as long as third, its central plate barely as long as broad at base, defined laterally by sharp, posteriorly divergent grooves, smooth and polished; the following tergites smooth and polished; ovipositor sheath shorter than hind femur.

Black; antennae brownish basally; anterior femora apically, anterior and middle tibiae and their tarsi yellowish brown; hind tibiae brown basally; wings hyaline, stigma brown.

*Type.* U. S. National Museum No. 63288.

*Type-locality.* MEXICO.

Described from 12 female specimens reared from a larva of *Diatraea* sp. in sugarcane from an unknown locality in Mexico, intercepted at Laredo, Texas, March 2, 1949, by inspectors of the U. S. Department of Agriculture.

### **Apanteles diatraeae** Muesebeck

*Apanteles diatraeae* Muesebeck, 1921. Proc. U. S. Nat. Mus. 58: 491, 520. ♂ ♀.

The type series is from Cuba but I have seen numerous specimens from other islands of the West Indies, and also from various localities in Central and South America, as well as one series from Arizona. The recorded hosts are *Diatraea saccharalis* (F.), *D. lincolata* (Walk.), and *Zediatraea grandiosella* (Dyar).

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### **Professor Bradley Honored by the Tenth Congress**

One of the actions taken by the recent Tenth International Congress held at Montreal was the election of DR. J. CHESTER BRADLEY as an Honorary Life Member of the congresses. Dr. Bradley also continues as a member of the Permanent Committee of the entomological congresses. DR. O. A. JOHANNSEN is the only other American Honorary Life Member, having been elected at the Stockholm congress in 1950. Both Professors Bradley and Johannsen have long been members of the American Entomological Society and contributors of scientific papers to ENTOMOLOGICAL NEWS.